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Title: Dichroic Polarizer

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1. A.I.Vanyurikhin, V.P.Gerchanovskaya, "Optical polarizing devices", Kiev, Tekhnika, 1984, in Russian
2. PCT 94/05493, Cl. C09B31/147, 1994
3. PCT WO 94/28073, December 8 1994

ABSTRACT

The invention belongs to polarizing devices and can be used in lighting equipment, manufacturing construction-material glasses, and in displays.

The proposed dichroic polarizer includes a substrate and at least one layer dichroically absorbing electromagnetic radiation, into which two reflecting coatings are introduced, at least one of which is made partially transmitting. The layer dichroically absorbing electromagnetic radiation is located between the reflecting coatings. The materials and thicknesses of layers of both the dichroically absorbing electromagnetic radiation and the reflecting coatings are selected from the requirements to obtain, at the exit of the dichroic polarizer, an interference minimum for the absorbing component of electromagnetic radiation for, at least, one wavelength value.

The invention leads to increasing efficiency of dichroic polarizers at the expense of increasing degree of polarization of electromagnetic radiation leaving the polarizer, while high transmission (reflection) coefficient for the non-absorbed component is preserved. 5 formulas, 3 illustrations.